LEAD BASED PAINT INSPECTION AND RISK ASSESSMENT

Prepared for:

ARAPAHO AND ROOSEVELT NATIONAL FOREST AND PAWNEE NATIONAL GRASSLAND

October 28, 2009

Contract Number: AG-82X9-C-09-0140
Task Order: AG-82X9-D-09-0099
Innovar Project Number: 8067-001

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CERTIFICATION OF RESULTS

This preliminary assessment was conducted on behalf of Innovar Environmental, Inc. and The United States Forest Service, solely for use in evaluation of the presence of lead-based paint on the structures included in the scope of work. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than the above-named entities, without the prior written consent of KEMWest, Inc.

This report is respectfully submitted this 26th day of October 2009.

KEMWest, Inc.

James R. DeValois, CIH
President

1. OBJECTIVE AND SCOPE OF SERVICES

1.1 Scope of Work

Innovar Environmental, Inc. teamed with KEMWest, Inc. and Accurate Lead Testing for the execution of this project. This report summarizes the work completed by the Innovar Team under Contract AG-82X9-C-09-0140, Task Order AG-82X9-D-09-0099 for hazardous waste management service for the Arapaho and Roosevelt National Forest and Pawnee National Grassland. Work included the lead paint inspection and risk assessments for the following Forest Service sites/facilities:

A. Rollinsville Work Center (Boulder County, Colorado). The Rollinsville Work Center has five (5) structures including two (2) bunkhouses, a storage shed, a garage, and a pump house. The physical address of the property is 835 Tolland Road, Rollinsville, Colorado 80474.

B. Rutledge Cabin (Boulder County, Colorado). The St. Vrain Cabin has three (3) structures including a house, a garage, a fire cache, and a pit toilet.

C. Miner's Street (Clear Creek County). The Miners Street site has two (2) structures including a house and a garage. The physical address of the property is 1120 Miner Street, Idaho Springs, Colorado 80452.

1.2 Limitations

Information contained herein is based on information available to and data gathered by the Innovar Team during the performance of this project. Conclusions and recommendations pertaining to environmental conditions at the subject site are limited to the conditions observed and the samples collected at the time this investigation was undertaken. This assessment is not intended to represent an exhaustive research of every potential hazard or condition that may exist, nor does it claim to represent indoor conditions or events that arise after this inspection.

The Innovar Team is not liable for the discovery and elimination of hazards that may potentially cause damage, accidents, injury or disease. The conclusions and recommendations presented in this report are based on a reasonable level of investigation within the normal bounds and standards of professional practice for an investigation of this nature.

No other warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client, and their prospective assignees that are involved in this particular transaction. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report or the findings, conclusions, or recommendations by any undesignated third party or parties will be at such party's sole risk and the Innovar Team disclaims liability for any such third party's use or reliance.

2.0 LEAD PAINT TESTING

2.1 Definition of Lead Based Paint

The U.S. Department of Housing and Urban Development (HUD) Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) define lead based paint as a paint film with a concentration greater than one-half of one percent (>0.5%) lead by weight when measured by laboratory analysis. The Occupational Safety and Health Administration (OSHA) differs in its definition of lead based paint. According to OSHA, any paint film with a detectable amount of lead is considered lead containing paint and is regulated under the requirements of 29 CFR 1926.62, Lead in Construction: Interim Final Rule. Therefore, should renovation or remodeling activity impact leaded paint, contractors should be made aware of these requirements. Lead paint films with XRF assay results equal to or greater than 1.0 milligrams per square centimeter (mg/cm^2) are considered to be lead-based paint.

The measured lead levels and the condition observed on the property are interpreted within the context of applicable regulations and currently accepted guidelines for assessing and abating materials, which contain lead.

2.2 Paint Testing Methods

Lead paint testing was conducted by Accurate Lead Testing, Colorado State Risk Assessor license number 8903, Colorado State lead evaluation firm license number 84-1204811. The testing was conducted using a Scitec spectrum analyzer, serial number 1357. Accurate Lead Testing's complete report is presented in Appendix A.

2.3 Results of Paint Testing

The results of the lead paint testing are summarized below, only paint films with greater than or equal to 1.0 mg/cm^2 are identified in the table. Duplicate components (for example walls or doors) on different sides are not repeated in the table. The painted surfaces observed in poor condition or the highest concentrations are listed. Please see Appendix A for complete results.

Rollinsville Work Center
835 Tolland Road, Rollinsville, Colorado 80474
Two (2) bunkhouses, (1) storage shed, (1) garage, and (1) pump house

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
Women's Bunkhouse					
Exterior	Door molding	Wood	Brown	Poor	1.558
Exterior	Wall	Wood	Brown	Intact	1.117
Exterior	Soffit	Wood	Brown	Poor	1.082
Exterior	Fascia	Wood	Brown	Intact	1.309
Exterior	Fascia	Wood	White	Intact	1.984
Exterior	Gutter	Metal	Brown	Intact	1.916
Exterior	Crown molding	Wood	Brown	Intact	1.256
Exterior	Wall	Wood	Tan	Poor	1.102
Shed 0705					
Shed	Door	Wood	Brown	Poor	6.382
Shed	Door jamb	Wood	Brown	Intact	8.03
Shed	Door molding	Wood	Brown	Poor	9.619
Shed	Wall	Wood	Brown	Poor	7.016
Shed	Soffit	Wood	Brown	Intact	3.904
Shed	Rail	Wood	Brown	Intact	8.965
Shed	Wall	Concrete	Brown	Intact	1.699
Shed	Fascia	Wood	Brown	Intact	11.411
Shed	Window molding	Wood	Brown	Intact	8.897
Shed	Window sash	Wood	Brown	Intact	8.359
Garage					
Garage	Door	Wood	Brown	Poor	15.594
Garage	Wall	Wood	Tan	Poor	7.063
Garage	Soffit	Wood	Tan	Poor	14.82
Garage	Corner Board	Wood	Tan	Poor	9.772
Garage	Wall	Wood	Tan	Poor	12.021
Garage	Rafter	Wood	Tan	Poor	13.677
Garage	Window sill	Wood	Brown	Poor	13.9
Garage	Window sash	Wood	Brown	Intact	6.403
Garage	Fascia	Wood	Tan	Intact	15.955
Garage	Window molding	Wood	Brown	Poor	14.12
Garage	Interior door	Wood	Tan	Intact	12.141
Garage	Door	Wood	Blue	Intact	8.479

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
Men's Bunkhouse, Building 850 (701)					
Exterior	Fascia	Wood	Brown	Poor	1.685
Exterior	Soffit	Wood	Brown	Poor	1.372
Exterior	Wall	Wood	Brown	Intact	1.285
Pump House was built 4-5 years ago and is not a testable unit					

Rutledge Cabin (Boulder County, Colorado).
Three (3) structures including (1) house, (1) garage, (1) fire cache, and (1) pit toilet

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
House					
Kitchen	Cabinet	Wood	White	Intact	6.261
Kitchen	Wall	Tile	White	Intact	21.395
Bathroom	Wall	Tile	Green	Intact	15.355
Bathroom	Rail	Tile	White	Intact	16.649
Exterior	Window jamb	Wood	Green	Intact	2.344
Exterior	Window sill	Wood	Green	Intact	1.451
Exterior	Door jamb	Wood	Green	Intact	1.226
Garage no surfaces above 1.0 mg/cm^2					
Pit Toilet					
Outhouse	Ceiling	Metal	White	Poor	2.67
Fire Cache does not exist					

Miner's Street
1120 Miner Street Idaho Springs, Colorado 80452
Two (2) structures including (1) house and (1) garage

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
House					
Bathroom	Door molding	Wood	White	Intact	1.13
Bedroom	Wall	Plaster	White	Intact	1.081
Basement	Wall	Concrete	Gray	Intact	12.58
Basement	Wall	Concrete	White	Intact	12.7
Basement	Wall	Plaster	White	Intact	15.978
Basement	Closet wall	Plaster	White	Intact	3.301
Basement	Closet wall	Concrete	Tan	Intact	3.992
Basement	Ceiling	Plaster	White	Intact	12.526
Utility	Wall	Plaster	White	Intact	9.292

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
Utility	Wall	Plaster	Tan	Intact	11.004
Utility	Wall	Concrete	White	Intact	9.359
Utility	Wall	Concrete	Tan	Intact	12.137
Utility	Wall	Drywall	White	Intact	5.03
Exterior	Door	Wood	Brown	Intact	11.286
Exterior	Door jamb	Wood	Brown	Intact	8.898
Garage					
Exterior	Soffit	Wood	Green	Poor	5.691
Exterior	Fascia	Wood	Green	Poor	3.894
Exterior	Gutter	Metal	Green	Poor	3.756
Exterior	Door	Wood	Brown	Intact	4.651
Exterior	Door jamb	Wood	Brown	Intact	9.718
Exterior	Door molding	Wood	Brown	Intact	3.244
Exterior	Window sash	Wood	Brown	Intact	1.906
Exterior	Window jamb	Wood	Brown	Intact	10.48
Exterior	Window molding	Wood	Tan	Intact	5.744
Exterior	Window sill	Wood	Tan	Poor	6.207
Exterior	Window molding	Wood	Tan	Poor	7.852
Exterior	Window molding	Wood	Brown	Poor	6.699
Exterior	Gutters	Metal	Brown	Poor	10.764
Exterior	Garage door	Wood	Brown	Poor	5.618
Entry	Door	Wood	Green	Intact	3.596
Entry	Door jamb	Wood	Green	Intact	4.591
Entry	Window sash	Wood	Green	Intact	4.18
Entry	Window sill	Wood	Green	Intact	4.511
Entry	Window molding	Wood	Green	Intact	5.636
Entry	Floor	Wood	White	Intact	3.331
Bathroom	Door	Wood	Green	Intact	4.452
Bathroom	Door jamb	Wood	Green	Intact	3.587
Bathroom	Door molding	Wood	Green	Intact	4.452
Bathroom	Window sash	Wood	Green	Intact	4.176
Bathroom	Window sill	Wood	Green	Intact	4.299
Bathroom	Window molding	Wood	Green	Intact	6.219
West room	Door	Wood	Green	Intact	5.596
West room	Door jamb	Wood	White	Intact	5.221

Location:	Component:	Surface Substrate:	Color:	Condition:	Result: (mg/cm^2 lead)
West room	Door molding	Wood	Green	Intact	6.371
West room	Window molding	Wood	Green	Intact	3.449
West room	Window sill	Wood	Green	Intact	4.175
West room	Window sash	Wood	Green	Intact	3.082
Shop	Door jamb	Wood	Brown	Intact	4.106
Shop	Door molding	Wood	Brown	Intact	5.015
Shop	Door	Wood	Brown	Intact	4.526
Shop	Window molding	Wood	Brown	Intact	3.822
Shop	Window sash	Wood	Brown	Intact	5.017
Garage	Door	Wood	Green	Intact	4.518
Garage	Door jamb	Wood	Green	Poor	4.888
Garage	Door molding	Wood	Green	Intact	3.011
Garage	Window molding	Wood	Green	Intact	2.415
Garage	Window sill	Wood	Green	Intact	2.215
Stairway	Window sill	Wood	Green	Intact	5.206
Stairway	Header	Wood	Yellow	Intact	1.07
Stair down	Door molding	Wood	Green	Intact	3.21
Stairway	Door molding	Wood	White	Intact	3.038
Stairway	Door jamb	Wood	White	Intact	4.73
Stairway	Door	Wood	White	Intact	4.05
Store room	Door jamb	Wood	White	Intact	6.26
Store room	Door molding	Wood	White	Intact	6.191
Store room	Door	Wood	White	Intact	4.307
Store room	Window sash	Wood	White	Intact	2.662
Store room	Door jamb	Wood	White	Intact	5.563
Store room	Door molding	Wood	White	Intact	4.476

In addition to XRF analysis, wipe samples were taken from floors, window sills, window troughs, and bulk soils. The front entry (#1), and front bedroom (#11) samples were above the HUD/EPA lead hazard standards for floors. All other samples were below the standards of:

Floors: 40 micrograms per square foot ($\mu g/ft^2$)
Window sills: 250 $\mu g/ft^2$
Window Troughs: 400 $\mu g/ft^2$
Soil: 400 parts per million

3.0 CONCLUSIONS AND RECOMMENDATIONS

A. Presence of Potential Lead Hazards

The lead containing paint present at the properties as documented in this report may pose a risk of lead exposure and lead poisoning to occupants, particularly children, workers, and visitors. All lead related clean up and/or abatement activities must be performed in compliance with OSHA regulations.

B. General Recommendations for Controlling Lead Hazards

Should renovation of the property be performed, the Occupational Safety and Health Administration (OSHA) requires compliance with 29 CFR 1926.62 which requires that employers (contractors) implement medical surveillance programs, personal protection, engineering controls, record keeping, and training prior to removing lead paint. In addition, all debris generated during the removal process is required to be tested by Toxicity Characteristic Leaching Procedures (TCLP) to determine the proper disposal sequence. Waste generated that tests > 5ppm by TCLP must be manifested and disposed of as Hazardous Waste at an EPA approved landfill.

Contractors and workers should be made aware of the presence of leaded materials and demonstrate their compliance procedures with OSHA 29 CFR 1926.62 prior to disturbing any leaded materials. Subsequent to any abatement, cleanup, or disturbance of leaded materials, clearance sampling should be performed to ensure that residual lead dust and debris does not exist at the property.

C. Maintenance of Lead Painted Surfaces

This discussion relates to intact lead painted surfaces. Government authorities now recognize that even intact lead surfaces pose a health risk and should be abated (covered or removed). Accordingly, it is recommended that any lead painted surfaces that are accessible to children (particularly mouthable surfaces) or that are subject to friction (as doors, floor, window components, etc.) should be properly abated. Abatement may consist of removal of the lead-based paint or covering the lead based paint with rigid barriers such as sheet-rock or paneling in accordance with HUD Guidelines and applicable regulations.

In the absence of full removal or covering of lead paint with impermeable barriers, it is advisable that a primer and several layers of high quality paint be applied over intact lead painted surfaces. Following the covering with a primer and paint, the following program of inspection and maintenance of intact painted surfaces can lower the risk of lead dust hazards:

1. Avoid any activities that disturb lead painted surfaces. Even chemical stripping of lead based paint will generate lead dust.

2. Wet wipe surfaces with water containing a detergent. Conduct with a frequency sufficient to prevent accumulation of dust.

3. Frequently inspect lead painted surfaces to assure they are intact. Problematic surfaces should be abated in conformance with OSHA regulations.

4. Avoid the use of regular vacuum cleaners on debris that may contain lead dust. Use of high efficiency particulate air (HEPA) vacuums is recommended with a frequency sufficient to prevent accumulation of dust. **Note**: Changing of HEPA filters requires that special safety and health precautions be followed.

5. Monitor activities of workers. Air monitoring and medical surveillance must be performed prior to commencement of any lead removal activities in order to determine compliance with the permissible exposure limit (PEL).

6. Determine workers' blood lead levels at a frequency prescribed by OSHA. OSHA requires that blood testing be performed before lead abatement jobs begin then every two months for the first six months then every six months thereafter.

7. Toxicity Characteristic Leaching Procedure (TCLP). TCLP samples should be collected at the time of abatement for proper disposal sequence. Lead abatement methodologies can influence the TCLP results.

This is general information for reducing the risk of lead poisoning. Detailed information on avoiding and/or treating lead poisoning can be obtained without cost from:

The National Center for Education in Maternal and Child Health
38th and R Streets
Washington, DC 20057
Telephone 202-625-8400

Additionally, we recommend that you appraise all contractors working in or on the property of the presence of lead containing paint. These workers have a legal "Right to Know" about hazards they may encounter.